



Drilling Fluids, Inc.

Petro Drill Oil Base Product

MUL THIK

Description

MUL THIK is a Bentonite based, organophillic clay viscosifier and gellant for moderate to high temperatures in GEO PetroDrill oil base mud.

Uses

In GEO PetroDrill invert emulsion systems MUL THIK is used as a viscosifier and thixotropic gellant to increase yield point and gel strengths. Mixed in water, MUL THIK may be used as an inverted "Gunk Squeeze" in oil base mud.

Benefits

MUL THIK provides a solids based viscosity which is persistent and cost effective.

Treatment

In GEO PetroDrill systems 5-20 ppb MUL THIK may be added. Pilot testing, including 24 hour hot roll are required for best results as optimum yield requires time, shear, and temperature. Judicious treatments are necessary to avoid over treatment.

Use of this gellant in temperature environments above 300°F may require increased daily treatments. Under these circumstances, a change to the high temperature viscosifier (MUL THIK HT) may provide more stable fluid properties and economy.

Function

MUL THIK is a Wyoming bentonite which has been amine treated to make it oil wettable (organophillic). In invert emulsion oil based mud the continuous oil phase wets the clay and penetrates the interlayer area to cause swelling. A small amount of water (>0.1%) in the mud is required to allow oil penetration of the clay.

Typical Physical Properties

Appearance:.....Tan buff free flowing powder
Specific Gravity:.....1.50—1.70
Bulk Density:.....43 - 45 pcf
Particle size:.....90% passing through 200 mesh
70% passing through 325 mesh



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**Safe Handling
Recommendations**

Packaging

MUL THIK (Continued)

Utilize normal precautions for employee protection when handling chemical products. Use of appropriate respirator, gloves, goggles, and apron is recommended for employee comfort and protection. See Material Safety Data Sheet (MSDS) for this product prior to use.

MUL THIK is packaged in 50 lb multi-wall bags.